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08/837009ZA

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Doc Code: Computer

pages of specification

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content unspecified or combined

Doc Code: Artifact

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Artifact Type Code: P

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Artifact Type Code: S

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Artifact Type Code: U

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The United States Patent Document

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as provided by law.*

Bence Lehman

Commissioner of Patents and Trademarks

Mayorie V. Turner

Attest





US005405942A

United States Patent [19]
Bell et al.

[11] Patent Number: 5,405,942
[45] Date of Patent: Apr. 11, 1995

[54] **PREPRO INSULIN-LIKE GROWTH FACTORS I AND II**

[75] Inventors: **Graeme I. Bell; Leslie B. Rall**, both of San Francisco; **James P. Merryweather**, Berkeley, all of Calif.

[73] Assignee: **Chiron Corporation**, Emeryville, Calif.

[21] Appl. No.: 65,673

[22] Filed: Jun. 16, 1987

Related U.S. Application Data

[63] Continuation of Ser. No. 630,557, Jul. 13, 1984, abandoned.

[51] Int. Cl.⁶ C12N 15/17; C12N 15/12; C07H 21/04; C12Q 1/68

[52] U.S. Cl. 536/23.1; 536/24.31; 435/69.1; 435/69.6; 435/172.3; 435/252.31; 435/252.33; 435/254.2; 435/320.1; 435/6

[58] Field of Search 536/27, 28, 23.1; 435/253, 254, 255, 68, 70, 172.3, 320.1, 69.1, 6, 69.6; 935/4, 8, 13, 4, 69, 72, 73, 74

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Attorney, Agent, or Firm—Morrison & Foerster

[57] **ABSTRACT**

Polynucleotide sequences which encode for human prepro insulin-like growth factors are provided. Such sequences are obtained from the human genome, typically by screening a cDNA library obtained from human liver cells. The polynucleotide sequences may be used for cloning and expression of insulin-like growth factors in suitable hosts, as well as for the production of DNA and RNA which may be used as hybridization probes.

E. coli strains HB101(phigf1) and HB101(phigf2) were deposited at the ATCC on Jun. 8, 1984, and granted accession nos. 39729 and 39730, respectively.

22 Claims, 3 Drawing Sheets

maintenance fees
ten years and six
months thereafter upon
the timing of the
payment of the
fee on or before the
date will expire as of